

WHAT IS CLAIMED IS:

1. An optical positional deviation detecting apparatus for optically detecting a positional deviation in alignment between a first mark and a second mark of a measurement mark configured by forming the second mark on the first mark, comprising:

an irradiation optical system for irradiating the measurement mark with a beam of irradiation;

an image forming optical system for forming an image of the measurement mark by converging reflected beam from the measurement mark;

an imaging device for photographing the image of the measurement mark, which has been formed by said image forming optical system;

an image processing device for measuring the positional deviation in alignment between the first mark and the second mark by processing an image signal obtained by said imaging device; and

an image field area adjustment mechanism for adjusting an image field area for said imaging device to photograph the image of the measurement mark.

2. An optical positional deviation detecting apparatus according to claim 1, wherein said image field area adjustment mechanism is constructed of a field stop provided on said irradiation optical

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system, a field stop position adjustment mechanism for adjusting a position of said field stop, and an imaging position adjustment mechanism for adjusting a position of said imaging device,

5           said field stop and an imaging surface of said imaging device are disposed in optically conjugate positions, and

10           said imaging position adjustment mechanism adjusts the position of said imaging device in accordance with the field stop positional adjustment effected by said field stop position adjustment mechanism.

20           3. An optical positional deviation detecting apparatus according to claim 1 or 2, wherein said image field area adjustment mechanism adjusts the image field area on the basis of an asymmetric focus characteristic curve of the L/S mark pattern image obtained when forming the image of the L/S mark pattern within the image field area of said imaging device.

25           4. An optical positional deviation detecting apparatus according to claim 3, wherein said image field area adjustment mechanism adjusts the image field area so that the asymmetric focus characteristic curve of the L/S mark pattern image

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obtained when forming the image of the L/S mark  
pattern within the image field area of said imaging  
device, exhibits a characteristic that is symmetric  
to the center of the visual field.

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